Scolytus schevyrewi Semenov – An Asian Bark Beetle New to the United States

(Pronunciation: Sko-li-tus chevy-rev)

Scolytus schevyrewi, the banded elm bark beetle (proposed common name), was first collected in insect traps set in Aurora, CO (a suburb of Denver), and Ogden, UT, in April 2003. Dr. James LeBonte, Oregon Department of Agriculture, first identified the beetle as new to the United States. By the fall of 2003 this bark beetle had been collected in the following states: Arizona, California, Colorado, Idaho, Illinois, Kansas, Nebraska, New Mexico, Oklahoma, Oregon, South Dakota, Utah, and Wyoming. Recent examination of the state insect collection in New Mexico revealed that S. schevyrewi was present in Clovis, New Mexico, as far back as 1998. The beetle was observed attacking and killing drought stressed Siberian elms. The Animal and Plant Health Inspection Service (APHIS), state forestry organizations, and the U.S. Forest Service are currently working together to map out the range and impacts of this exotic bark beetle.

S. schevyrewi is native to Asia, including the countries of China, Kazakhstan, Korea, Kyrgyzstan, Mongolia, Russia, Tajikistan, Turkmenistan, and Uzbekistan. In Asia, hosts for S. schevyrewi include a variety of native elm species, willows (Salix spp.), fruit trees such as apricot, cherry, and peach (Prunus spp.), and Russian olive (Elaeagnus angustifolia).

In the United States, the banded elm bark beetle has been found infesting and breeding in American, English, rock, and Siberian elms only. The beetle has been collected from broken elm branches, fallen elm trees, stacks of elm firewood, and elm trees stressed by drought. S. schevyrewi also has been reported to be present in trees dying from Dutch elm disease. The biology of S. schevyrewi is similar to that of S. multistriatus, another exotic bark beetle native to Europe, which is the principle vector of Dutch elm disease in the United States. The banded elm bark beetle completes a generation in two months or less. S. schevyrewi probably completes a minimum of 2 – 3 generations per year in the Denver area. The egg galleries of these two species of bark beetles are very similar.

The literature suggests that newly emerged brood beetles of S. schevyrewi have a period of feeding at branch junctions in the canopies of living elms, like that reported for S. multistriatus. This is important because feeding by S. multistriatus on branch junctions in the canopies of elm trees is one mode of transmission of the Dutch elm disease fungus to uninfected trees.

Studies of the banded elm bark beetle in 2003 indicate that some brood larvae may burrow into the outer bark of infested elms to pupate and transform into adults. This behavior may explain how this Asian bark beetle was introduced into the U.S. Wood pallets or shipping containers constructed with beetle-infested elm wood, with the bark attached, may have been the original mode of introduction for this bark beetle into the U.S.

Insects and disease organisms introduced into the U.S. from other countries may have the potential to alter our natural forest ecosystems and damage ornamental vegetation. At this time, the banded elm bark beetle appears to pose a moderate risk to elms planted as shade trees or as windbreaks throughout the inland West, particularly during periods of drought. This species appears to be more aggressive than the ubiquitous S. multistriatus. In areas where the banded elm bark beetle has become well established, like Denver, this beetle is much more abundant in dying elms than is S. multistriatus.

Figure 1. Scolytus schevyrewi (photo courtesy of Dr. James LeBonte, Oregon Department of Agriculture).